CLAIMS OF THE INVENTION

I CLAIM:

1.   A method of determining the shape and size of a foot comprising the steps of:

obtaining an imprint of the foot;

scanning the imprint of the foot to obtain pixel image data regarding the foot imprint at one

or more points;

determining at said one or more points the depth of the imprint from the image data;

determining the size of said foot imprint; and

determining the curvature of one or more portions of said foot imprint.

2.   The method in accordance with Claim 1 including the step of obtaining red, blue and

green pixel image data of the foot imprint at one or more points.

3.   The method in accordance with Claim 1 including the step of converting said red,

blue and green pixel image data to YIQ pixel data.

4.   The method in accordance with Claim 3 wherein said step of determining the depth

comprises determining the depth of the imprint at a point from the Y pixel data for that point.

5.   The method in accordance with Claim 1 including the step of generating an altered

image of said foot imprint and determining the size of said foot imprint from said altered image.

6.   The method in accordance with Claim 5 including the step of passing image data through a filter to create said altered image.

7.   The method in accordance with Claim 1 including the step of generating an element

5   for mating with at least a portion of the foot using said depth, size and curvature information.

8.   The method in accordance with Claim 1 including the step of storing said depth, size and curvature information.

9.   A method of determining the size and shape of a foot comprising:

obtaining image data of an imprint of the foot at one or more points, said image data including a luminesce value;

determining a depth of the imprint at one or more points with said luminance value said one or more points and a slope of the luminesce value at said one or more points.

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10.   The method in accordance with Claim 9 wherein a depth value is determined at one or more points in accordance with a linear function of the luminance value and luminance value slope said one or more points.

20   11.   The method in accordance with Claim 9 wherein said luminance value and luminance value slope are modified by a first and a second coefficient, respectively.

12. The method in accordance with Claim 11 wherein a value of said first and second coefficients is determined using a least square method to minimize the average error.

13. The method in accordance with Claim 11 wherein a value of said first and second
5   coefficients is determined by measurement.

14. A method of determining the shape and size of a foot comprising the steps of:

obtaining an imprint of the foot;

scanning the imprint of the foot to obtain pixel image data regarding the foot imprint at one
10   or more points;

determining at said one or more points the depth of the imprint from the image data; and

determining a size of said foot from said pixel image data.

15. The method in accordance with Claim 14 wherein the step of obtaining an imprint
comprises creating an imprint in a foam member.

16. The method in accordance with Claim 14 wherein the step of scanning comprises
obtaining RGB pixel image data.

20   17. The method in accordance with Claim 16 including the step of converting said RGB
pixel image data to YIQ pixel image data and determining said depth using said YIQ data.

18.   The method in accordance with Claim 16 including determining the curvature of said foot in one or more areas using said pixel image data.

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